0063882

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

February 24, 2005

Mr. Roy J. Schepens
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

Dear Mr. Schepens:

Re: Washington State Department of Ecology Review of the Double-Shell Tank (DST) Permit Application, Rev. 0b, Notice of Deficiency (NOD) Response Table Submitted to Ecology on June 9, 2004

The Washington State Department of Ecology (Ecology) reviewed a portion of the Response Table (as referenced in Hanford Federal Facility Agreement and Consent Order Figure 9-2, Box 4) for the DST Permit Application Rev. 0b. Enclosed are Ecology's remaining NOD responses on Chapter 4; Appendix 4A, 4B, 4C, and 4D; Chapter 5; Chapter 6; Appendix 6A; and Appendix 11A.

Please contact me to set up times and location for the NOD workshops for the enclosed chapters. If you have any questions regarding this letter, call me at 372-7912 or Jeff Lyon at 372-7914.

Sincerely,

Brenda K. Jentzen

Brenda K. Jentzen
Permit Lead, Double Shell Tank System
Nuclear Waste Program

6 Enclosures

cc: Jim Rasmussen, USDOE
Edward Aromi, CH2M
Moussa Jarayssi, CH2M
Phil Miller, CH2M
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Todd Martin, HAB
Ken Niles, ODOE

cc/enc: Richard McNulty, USDOE
Kathy Tollefson, CH2M
Ted Wooley, CH2M
Ro Vison, PAC
Administrative Record: DST; Tank Waste Storage
CH2M Correspondence Control
Environmental Portal

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
1.	Chapter 4 General	The application will need to be updated to reflect any operational changes that may occur during the application review cycle. As an example, when/if the operation limit for the DST level is re-rated an update will need to be submitted for the application to reflect the change. Response: accept Ecology Response: Incorporate into the updated information the equipment and DST systems installed, such as the equipment as part of Project W-314, DST system integrity, system inspections, independent QA/QC assessments, and associated system certifications.	
2.	General	The organization of this chapter makes it very difficult to follow. It is hard to tell when the information is tank farm specific and when the information is for all of the tanks. (e.g., on page 4-45, the ENRAF seems to be only addressing the AP tank farm but it is not in the section that discussed the AP tank farm only.) Reorganize the chapter for clarity. Response: accept, will expand discussion to include the other five (5) farms. Ecology Response: Provide text for clarity.	
3.	General	The application does not address material balance and the posting of operators along the transfer routes while waste is being transferred. The DOE and contractors have stated that they consider these operations as part of leak detection. Add this information to the text. Response: accept, will provide a generic description of posting location of operators and the process of maintaining material balance during transfers. Ecology Response: Provide Text for clarity and enforceability	
4.	General	On secondary containment: Please explain any provisions available to flush pipeline secondary containment in the case of a leak. Describe the equipment that is available to flush secondary containment Response: reject, no provisions exist for flushing secondary containment. However encasement drains are open during transfers in the event that a leak occurs. Leaving encasement drains open meets the regulatory requirement [WAC-173-303-640(4)(c)(iv)] Ecology Response: If DOE wants to take credit for drains meeting the WAC requirements, describe in the permit application how these drains operate.	WAC 173-303-640(4)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
5.	General	Demonstrate that each secondary containment system is capable of holding 120% of the waste that is within its catchment area at any specific time. This includes during transfers and misroutes. Response: reject, please provide regulatory basis for the "120%." Please note if this is a regulatory requirement it would only apply to pits. By design, the DST annulus level increase will stop once the primary and annulus levels equalize. Although the annulus will not hold one-million gallons, the combined primary/secondary does. Piping encasements will become the transfer pipe if a leak occurs in the primary and will route all the liquid to a pipe end pit or tank. The encasement does not need to be sized to hold the entire volume of the primary. Ecology Response: State how the pits and other secondary containment structures are compliant with WAC 173-303-640(4).	WAC 173-303-640(4)
6.	Chapter 4, Checklist Item D-2a	Provide the design and construction standards used to construct both the primary and secondary DST shells. Clarify if all the construction standards were followed, to include leak testing of both the primary and secondary shells. Ecology assumes the other informational requirements of the permit will be included in the integrity assessment (IA), as stated in the I. A. plan. Response: accept, Table 4-3 and 4-4 lists the construction standards. Hydrotesting of the primary shell was performed for all of the DSTs and this is documented in project records. Hydrotesting of the secondary shell was not performed because of the large potential of "floating" the primary tank. Ecology is correct in assuming that the IA plan and report do address construction standards Ecology Response: Reference the appropriate WAC sections as to meeting all the construction standards, as well as the IA plan and report.	WAC 173-303-806(4), -640(2)(c)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
7.	Chapter 4, Checklist Item D-2b	The detail in this section is insufficient and incomplete for assessing secondary containment and leak detection for the transfer system. Present the following information of each transfer line segment: • line designation Response: reject, Line designation is already provided by B227 drawings and component lists Ecology Response: The response is insufficient. The text does not have adequate detail to determine the detection and sensing threshold of a leak, nor does the legend on the B-227 drawings include sufficient details to assess the adequacy of secondary containment of the lines. Add legend to clearly depict which numbers designate the lines. • profile and map view of pipe run (as built or design drawings) Response: accept: will provide if available in revision 1. Ecology Response: Provide profile and map to be included in the permit. • elevations of the endpoints of the line segments specific details on leak detector location, type, and spacing Response: accept will add more information on elevation of endpoints and leak detectors. Ecology Response: Provide text for clarity and enforceability. • leak volume and rate needed to trip leak detector, demonstrating your ability to detect a leak rate of 0.1 gal/hr within 24 hours. Response: 0.1 gal/hr within 24 hours is not a regulatory requirement within WAC-173-303. Please provide the basis for this leak rate. More information will be provided on pit trigger volumes and pit leak detection verification. Ecology Response: Provide pit trigger volumes and pit leak detection verification methodologies in the text for clarity and enforceability. Provide the design baseline used in detecting a leak (volume) and the leak rate needed to trip leak detector. Information is also needed on pipe life, e.g., number or leaks or pipe segment failures as a function of time. The permittee needs to establish or demonstrate what the "minimum detectable leak to the environment" is given the proposed design and operation of each individual subsystem. This will serve as the quantification of the word "any" in the regulations, which defines the system goal: to "...detect any leak … (to the environment)...over the active life of the tank system?" Response: accept, more information will be provided on pipe life. Information on leaks or known releases is already provided in Appendix 11 A. The following text will be added "leak detection trigger volumes can be found in "Transfer Leak Detection Alarm Activation Percent Volume Level" (RPP-13909, Rev. 0) RPP-13909.	WAC 173-303-806 (4) (c) (vii)

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
		Ecology Response: When referencing DOE documents, give the following information: • Give a summary of the document's overall purpose. • Summarize how the document is applicable. (Its meets the regulations by X, Y, Z ….) • Give the page numbers that are applicable to meeting the regulation/requested information. In this case, provide a summary of the necessary data and findings.	
8.	Chapter 4, Checklist Item D-2b, D-2a(2)	Define the type of assessment performed on the drain system and pits to determine for leak tightness. Project W-314 did appear to have leak tested portions of the pits after they were coated with polyurea, but this testing did not seem to extend to the drains. If not, what investigations will be performed to ensure the integrity of the drains and pits? Response: accept pits are hydro tested for tightness over 24 hours. Pit leak detection is also tested during this period. Drains are not tested. Ecology Response: Explain how drains are evaluated for design performance and the associated performance measures (e.g., maintain a liquid level within +/- 0.1 inches over a 24 hour period).	WAC 173-303-806(4)(c)(vii), WAC 173-303-640(3)(e)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
9.	Chapter 4 Section 4.1.5.4	Provide detail on the design and installation of the cathodic protection system. The text does not describe whether the tanks are protected, or just the transfer system. The text does not include any information on the system history that impacts design and life. If the system is field fabricated, provide documentation that the installation was supervised by an independent corrosion expert (WAC 173-303-640(3)(g), including the certification statement required in WAC 173-303-640(3)(h). Existing tank systems are required to document existing corrosion protection measures (WAC 173-303-640 (2)(c)(iii). Response: partial accept, Section 4.1.1.1 describes the basic tank design including the description of the concrete encasement. The encasement protects the secondary tank from external corrosion (via galvanic action) due to contact with soil. Text can be added to clarify the fact that the DSTs themselves do not require cathodic protection because of the encasement. As described in Section 4.15.4. The current cathodic protection system protects only the buried transfer lines that come in direct contact with soil. Appendix 4D provides a drawing list for all of the cathodic protection systems. Drawings or access to the drawings will be provided upon request. Design life consideration is addressed in the integrity assessment plan and report due 2006. Ecology Response: Response is inadequate. Details on the design and installation of the cathodic protection system(s) are required and that text needs to include any information on the system history that impacts design and life (or identify pending information). There are cases that some of the transfer piping systems use different materials (stainless steel connected to carbon steel) that could have adverse affects on cathodic protection systems. Provide text for clarity.	WAC 173-303-310 and WAC 173-303-395(6), WAC 173-303-640(3)(g), WAC 173-303-640(3)(h), WAC 173-303-640 (2)©(iii)
10.	General	Provide to Ecology all drawings that are referenced in Chapter 4. All drawings, specifications, and engineering studies need to be stamped by a professional engineer. Response: accept, all drawings referenced in chapter 4.0 will be provided during the NOD workshops. Any system that predates the effective date of RCRA does not require drawings to be certified by a professional engineer. Ecology Response: Provide information (e.g., summary listing) as stated above for enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
11.	General, Section 4.1.11, Checklist Item D-2f	Describe the design of the tank system to prevent escape of DW or EHW (by fugitive emissions or via stack). For example, this must include potential of migration of gaseous and liquid wastes through unsealed conduits and any other pathways, methods to contain waste drippage and spillage during equipment removal and replacement, methods/ procedures to deal with exhauster failure. Provide documentation that tanks waste is below the organic concentration of 10 percent by weight as required for an exemption from Subparts BB. Response: partial accept, the following will be added to Section 4.1.11 on air emissions; "All DSTs are actively ventilated by exhausters which impart a negative pressure within the primary and secondary shells. Fugitive emissions (gases) are mitigated through continuous operation of the exhausters. Exhausters facilitate dispersion of fugitive gases that are emitted from the DSTs to the extent that off-site receptors are adequately protected. Workers and onsite personnel must use appropriate personal protective equipment (PPE) when in certain areas of the Tank Farms. Annual emission rates are verified through annual certification of the Air Operating Permit (AOP)." The following will be added to Section 4.1.11.2 Applicability of Subpart BB standards "TWINS is the official TPA data base for documenting analytical results for tank waste characterization. The Best Basis Inventory (BBI) in TWINS provides the necessary documentation to prove that organic concentration does not exceed 10% by weight The active ventilation systems described in detail in Chapter 4.0 of this application and the AOP. Ecology Response: Validate that the TWINS/BBI for all tank waste proves that the organic concentration in waste stored and to be stored in DSTs (e.g., retrieved wastes from SSTs) does not exceed 10% by weight. Explain how worker safety (e.g. PPE) is managed for workers in the tanks farmers (i.e., explain how/when PPE is deemed appropriate in the tank farms). Provide text for clarity.	WAC 173-303-806(4)(c)(x), -640 (5)(e)-640(11), 283

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
12.	General	Design of secondary containment and leak detection system: The assumptions regarding waste rheology must be discussed. Provide this information in the text. These include, but may not be limited to the following: assumed solids content of the waste, particle-size distribution of solids, specific gravity of solids and liquids phases, viscosity of fluid, yield stress of fluid, scouring velocity needed to prevent plugging, thermodynamic fluid properties including scale formation and formation of precipitates upon cooling. These data and specifications must be certified by a registered professional engineer (PE). This information is needed for design/ operation of the leak detection system with sporadically- place leak detectors (e.g., excluding cross-site transfer system). Response: reject, neither WAC-173-303-640(4) nor WAC-173-303-806(4) (a) and (c) request that rheological data be presented. Please provide the regulatory basis for this request. Ecology Response: The comment deals with providing the design assumptions used for the secondary containment and leak detection systems. The regulations referenced identify specific elements that must be provided to assure adequate design and construction was done to store or treat dangerous waste. Secondary containment and leak detection systems are part of the DST System used to assure containment of dangerous wastes. This information is needed for design/operation of the leak detection system with sporadically-place leak detectors. Provide text for clarity and enforceability.	-806(4)(a), (4)(c), -640(4)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
13.	General	Check-valve effect of solids in the presence of a leak: In the case of a primary pipe leak, a small hole can be temporarily plugged by solids, either through precipitation or the physical effect of a particle lodged in the hole. This effect would cause an inconsistent and irregular fluid flow into secondary containment through the hole. Discuss the effect of this phenomenon on leak detection system efficiency and efficacy. Discuss evidence for this phenomenon based on the leak history of SSTs. Discuss potential effects of this phenomenon on the operation, reliability, and durability of the piping system under operating conditions and over the life of the facility. The PE certifying design of the tank system must specify whether this effect will, or will not, adversely effect the required operation of the secondary containment and leak detection system, and will include all objective and verifiable evidence to this effect. Response: reject, the basis for this comment is not clear. The leaks in SST transfer lines that are documented to date, were due to external corrosion, and driven by poorly designed and installed heat trace systems/conduits. DST transfer lines are under pressure during use while the tanks are atmospheric. There is a very low probability that a piece of solid waste would be able to partially or fully retain the transfer line pressure. In the unlikely event of partial blockage, leak detection capability could be inhibited, because it would take additional time for a partially blocked leak to build up enough liquid in the encasement or pit to set off the leak detection device. In the unlikely event of full blockage, no leak would occur because the hole is blocked. In either scenario it is possible upon next use, or post transfer flushing that a leak would be detected. This is what the system is designed to do in the first place. Please provide the regulatory basis for the last part of comment #31: "The PE certifying design of the tank system must specify whether this effect will, or will not, adversely effect the required operation of the secondary containment and leak detection system, and will include all objective and verifiable evidence to this effect." Ecology Response: WAC-173-303-806 clearly states the regulatory basis. The comment deals with providing assurance in the design assumptions used for the secondary containment and leak detection systems. Provide text for clarity and enforceability.	-806(4)(a), (4)(c), -640(4)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
14.	General	Provide the plan and cross-section of each piping segment that is part of this permit. Provide current "as builts" drawings. Each plan and profile must be based on as-built drawings and stamped by a Professional Engineer licensed in WA state. The plan and profile must include the location of leak detectors, pressure test risers, drains, pits, supports, thrust blocks, and all other pertinent details of construction. Response: partial accept, as-builts can be provided however because of the number of drawings available it would be impractical to provide these drawings for each piping segment. Please indicate which systems are of greatest interest so that a list of drawings can be generated and made available. Please note that not all of the post 2005 system will have stamped drawings because some of these systems were designed and built prior to the effective date of RCRA. Ecology Response: The intent of requesting "as-built" drawings of the piping segments cross-sections is to assure that there is adequate design detail documentation. Principle systems summaries (those systems that are representative of the "typical" piping systems), as well as summaries of piping systems details that are different than the principle systems, will suffice. Explain record retention, file system, and location of the drawings. Provide text for clarity.	-806(4)(a), (4)(c), -640(4)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
15.	General	Provide technical data, specifications, design calculations, and engineering studies (in conjunction with, and support of comments 10 above to show that the secondary containment and leak detection system is designed, installed, and operated to prevent any migration of waste out of the tank system at any time during the use of the tank system. The baseline or state-of-the-art leak rate to the environment is 0.1 gallons per hour. The description must not include assumptions that cannot be objectively verified and must be adequate to address each tank, piping segment, or appurtenance used to convey, store, treat, or control all waste phases including liquid, solid, and gaseous/ vaporous waste forms. The description must be certified by a registered professional engineer. If data does not exist, these limitations of design must be specified and can be allowed for submission on a case-by-case basis. Response: partial accept, given the size and complexity of the DST system the amount of technical data, specifications, design calculations, and engineering studies available regarding secondary containment and leak detection is considerable. Submittal of a complete data set could include hundreds of volumes. Please specify which systems are of the greatest interest and this data will be made available as practicable either hard copy or electronically. The referenced leak rate of 0.1 gal/hr is found in WAC-173-360-345(6)(d) and not in WAC-173-303. This leak rate does not apply to the DST system based on the following: WAC-173-360-100 "The purpose of this chapter is to address the serious threat posed to human health and the environment by leaking underground storage systems containing **petroleum and other regulated substances.**" WAC-173-360-120 "Regulated substance" means: Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under Subtitle C of the Federal Solid Waste Disposal Act, or a mixture of such hazardous waste and any other regulated substances); .." A leak rate of 0.1 gal/hr would translate to 2.4 gallons in a 24 hour period. Higher leak rates have already been agreed to for project W-314 (i.e.,10 gallons in a 24 hour period or 0.42 gallons per hour) Ecology Response: The intent here again is to assure that there is adequate design detail documentation. Overall design basis summaries would be helpful in ensuring that the leak detection systems are compliant. Information such as that provided above (e.g., project W-314 has the basis to detect 10 gallons in a 24-hour period or 0.42 gallons per hour) is what is being requested. There needs to be enough information provided that there is a good understanding of the systems being permitted. Provide the agreement for the W-314 project as stated above.	-806(4)(a), (4)(c), -640(4); OSWER 9483.00-3

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
16.	General	In several locations in Chapter 4, it states that detailed description and listing of components are provided in Section 4.1.3 and Appendix 4C. The description on components is in Appendix 4B and 4C. Section 4.1.3 does not provide detail. Change throughout chapter 4 for accuracy. Response: partial accept, section 4.1.3 will be changed to Section 4.1.4 "DST Tank Farm Specific System Descriptions". Reference to appendices will remain unchanged. Ecology Response: Accept	
17.	Page 4-1 Section 4.0 Line 21,22	The sentence that "as system components become isolated updated lists and/or sketches will be provided to Ecology" is not acceptable to Ecology. Isolating components is a closure action. Provide a schedule for closure of these items. Response: reject, component isolation is based solely upon requirements as stipulated in M-48-07 (b): "Isolation (i.e. administrative and/or engineering controls in place to prevent use within twelve (12) months or sooner from the date of removal from service." This is not considered a closure activity under RCRA or WAC-173-303. A closure schedule will be developed at a time prior to when DST closure activities actually commence. Ecology Response: Isolation is an activity in preparation for closure. Provide the compliance schedule for closure of these components in Chapter 11. Define Isolation in the glossary. Secondly, this is a RCRA Part B Permit Application; the TPA M-48-07 is a compliance schedule element and should not be a justification for rejecting the comment.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
18.	Page 4-2 Section 4.1.1.1	Table 4-3 and 4-4: Define "safe shutdown" in context of waste storage and conveyance. Provide detailed description of procedures to be followed for a "safe shutdown" during various operating scenarios. Procedures need to describe how the system will be verified safe after such an event (e.g., stop pumping, flush lines, pressure test, etc.) Response: partial accept, "Safe shut down earthquake" is nuclear terminology similar to a "design basis earthquake." This term refers to design criteria a category 1 nuclear facility must meet. The current DSA has reclassified the DSTs from category 1 to a category 2 which establishes different design criteria. These criteria will be reflected in tables 4-3, and 4-4 as appropriate. Emergency response proceedings are covered in Hanford Emergency Management Plan (DOE/RL 94-02), the Tank Farms Building Emergency Plan (HNF-IP-0263-TF) and the Double-Shell Tank Emergency Pumping Guide (HNF 3484). Ecology Response: Provide an adequate description of procedures that will be followed for a "safe shutdown" during various operating scenarios. The purpose is to assure that there is adequate design and procedures in place, as well as how the system will be verified safe after such an event (e.g., stop pumping, flush lines, pressure test, etc.). Define DSA and add to glossary.	
19.	Section 4.1.1.1, Page 4-2, Table 4-3 and 4-4	The claim is made that the heat generation rate is 100,000 BTU/h based upon 6 Ci/gal concentration in the waste. Please check these numbers. 6E6 Ci per tank, at 87 Ci/gram, 0.427 Watts/gram the heat generation is much higher at 7.6E8 BTU/h. If the calculation is in error, please correct it. Response: reject, calculations were checked. Result is 100506 BTU/hr/tank, no change necessary. Ecology Response: The value identified is correct. ^{137}Cs has a W/Ci of 0.00472 x 6,000,000 Ci/Tank x 3.414 Btu/hr/W = 96,700 BTU/hr/Tank. Difference in values is likely due to rounding. However, the aging waste Tank Farms AY and AZ have a different design basis, as called out in Note (i). This note should reference the higher design criteria for the AY and AZ Tank Farms or additional tables should be included to reference design criteria per Tank Farm.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
20.	Page 4-2 Section 4.1.1.1	Provide diagrams and as built drawings. The drawings in the Hanlon have more detail than figure 4-1. Drawings need to give enough detail. (Such as the location of the leak detectors) Response: accept, the level of detail provided in the figures is intended to be generic. More detailed drawings will be provided, however a limited number of drawings should actually be in the part B application to avoid change control issues. Specific drawings will be discussed during the NOD workshops. Ecology Response: This NOD will remain open until after discussions in the NOD workshops. (Note: Need a "somewhat" detailed drawing of all the different double-shell tank types.)	
21.	Page 4-3 Section 4.1.2:	This section advises that pre-2005 DST components are not covered under this permit. This is not an accurate statement. The permit application does address pre-2005 components, specifically isolation. Isolation is a closure action and all pre-2005 components must be address in the closure chapter. Response: reject, isolation is one of three activities described in TPA milestone M-48-07. None these activities are designated as RCRA closure activities. The last sentence in the milestone description calls for a description of the final disposition of each component upon removal from service (i.e., inclusion within a RCRA Closure Plan). Appendix 11B of the DST closure plan has the listing of post 2005 components and description of final disposition. Ecology Response: Appendix 11B has the listing of **pre**–2005 components and description of final disposition. These components are part of the DST system under interim status standards. Change the wording in this section as follows: "Most of the pre-2005 DST waste transfer … until June 30, 2005, and are not being permitted for operations. The pre-2005 components will be closed in accordance with WAC 173-303-610."	
22.	Page 4-3 Section 4.1.3.1:	Last paragraph in section appears to be redundant except for the last sentence. Delete last paragraph except for last sentence (add to previous paragraph). Response: accept, will strike redundant wording. Ecology Response: Accept.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
23.	Page 4-3, Section 4.1.3.1	Paragraph 2 states that, "precipitation will not infiltrate into secondary containment." Explain what measures have been taken to prevent infiltration. Report whether infiltration occurs between the secondary hull and cement sheath of any tank (tertiary containment). Response: accept, will add that the cover blocks are taped along their seams to prevent infiltration. Ecology Response: Provide a description of infiltration prevention. State how and when the tape is inspected for integrity to guard against infiltration.	
24.	Page 4-3 Section 4.1.3.2:	Second sentence in section is confusing. Sentence advises secondary containment for two categories of ancillary equipment will be discussed in the permit leaving the reader the impression there are more categories that will NOT be discussed. Clarify if there are categories of ancillary equipment that do not have secondary containment or that will not be discussed and why. Response: accept, two categories of ancillary equipment being discussed are 1) equipment that provides secondary containment 2) equipment that provides primary containment. Paragraph will be revised to more clearly state this. Ecology Response: The response is not clear. Ecology is not permitting ancillary equipment without secondary containment except in the case of a variance. Provide text for clarity and enforceability.	
25.	Page 4-4, Section 4.1.3.2.1.1.2	Describe the leak detectors that are used in the valve pits and the volume of waste required to set off the alarm on the leak detectors. Response: accept, leak detectors are described in later sections of the permit application (i.e., pages 4-16, 4-17) Appropriate references will be added to Section 4.1.3.2.1.1.2. Ecology Response: Provide text for clarity and enforceability.	
26.	Page 4-4, Section 4.1.3.2.1.1.3:	This section references "an agreement with Ecology" to not require upgrades of annulus pump pits. Provide the agreement. Response: accept will reference January 14, 2003 Ecology letter stating agreements for "proposed management of the deferred use components." Based on this letter it was agreed between USDOE an Ecology that annulus pump pits are considered emergency use only and therefore do not require upgrades to meet WAC-173-303 Ecology Response: Attach the letter to the permit application in an appendix.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
27.	Page 4-5 Section 4.1.3.2.1.2	Drain pits and their drains must be determined to not be leaking, or if leakage has occurred, that the system has not leaked during use. Please explain where these drains are, which have been tested or can be tested. Provide procedures for testing per -640(2)(a). Response: partial accept, all DSTs (with exception of AY/AZ) have drain pits. Drain pit drains are typically located in the center bottom of the pits. Per Ecology letter dated January 14th 2003 Lyon to Rassmussen drains are considered part of the secondary containment and as such will be included in the section integrity assessment that addresses secondary containment. Drain pits and drains used past June 30 2005 will be compliant. Ecology Response: Explain in the text that the drain pits and their drains will undergo integrity assessment to fulfill M-48-14.	
28.	Page 4-5 Section 4.1.3.2.1.2 Line 5	Line 5 states that drain pits are located on several tanks as described in Section 4.1.3.2.1.2. This statement occurs in Section 4.1.3.2.1.2. Where is the description on the location of drain pits? Response: accept, 4.1.3.2.1.2 will be revised to read Section 4.1.4 Ecology Response: Provide text for clarity.	
29.	Section 4.1.3.2.1.3, line 15	Describe the use of "liquid steam" in breaking up and removing sludge. Response accept: will define "liquid Stream" Ecology Response: Provide text for clarity.	
30.	Page 4-5 Section 4.1.3.2.1.3 Line 13	Are the tanks noted in the text the only Double Shell Tanks with sluice pits? If not, describe all others. Response: accept, all tanks with sluice pits are noted. No change required. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
31.	Page 4-5 Section 4.1.3.2.1.4	The text states that "feed pump pit—provides dedicated lines for moving waste from the tank to specific unit." Where are these lines located? Provide detailed information. Response: accept, the following text will be added: "there is only one operational feed pump pit in existence: 241-AW-02E which services the 242 A Evaporator. Evaporator feed is pumped from the 02E feed pump pit at Tank 241-AW-102, via line SN-267 and SN-268, to the 242-A Evaporator. Recirculation line SN-272 also connects the feed pump in Tank 241-AW-102 with a drop leg in the 241-AW-102 central pump pit through a diaphragm-operated valve." Ecology Response: Provide text for clarity and enforceability.	
32.	Page 4-5 Section 4.1.3.2.1.4.1	This section advises that, "non-compliant transfer lines will generally, be upgraded." : If upgrades are performed, they must reference the standards to which they will be upgraded (i.e. to WAC 173-303 and 40 CFR requirements). This decision should have already have been made. Please list the lines and their path forward to compliance or closure. Response: accept, will add references. Ecology Response: Provide text for enforceability.	
33.	Page 4-5, Section 4.1.3.2.1.4.1	DST transfer lines. Paragraph 2 of this section says that all transfer lines are, "...sloped so any liquid in the encasement will flow to a leak detector." Please provide design, installation and other records certified by a PE supporting to this statement. The documentation provided must include considerations related to the flow properties or rheology, solids content, scaling tendency, and nature of the waste with regard to effective operation of the leak detection and secondary containment system. per -806(4)(c), (4)(a), and -640(4)(b) Response: accept, a list of available design and installation records for the Post 2005 system will be provided during the NOD workshops. In the case of systems that were designed and installed previous to the effective date of RCRA it is likely that those records would not carry a PE stamp. Records will be made available electronically or hardcopy as practicable. Ecology Response: Provide text for clarity and enforceability.	

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
34.	Page 4-5, Section 4.1.3.2.1.4.1,	Paragraph 2 states that "most" transfer lines are cathodically protected. Specifically, state which lines are, and which are not cathodically protected as per certification by a licensed PE. This statement is consistent with Appendix 6, page APP 6A-39 where it states some piping may not meet NACE RP-0285 due to, "...adverse soil conditions, other metal structures... design constraints." Please explain this statement. Response: The Recommended Practice (RP) 0285 standard is not reached at every test station for the following reason: 1. Limitations of where the cathodic protection anodes could be located around some of the piping. 2. Chosen design limits of the current output from each anode. 3. Interfering structures between the anodes and piping to be protected. The aforementioned factors result in a low percentage of the piping not gaining 100 millivolts of polarization during operation of the cathodic protection systems. 100 millivolts of polarization gain is the lower standard recommended by National Association of Corrosion Engineers (NACE) RP-0285. In past judgments of polarization gain, around 5% of the polarization readings at the test stations showed less than 100 millivolts of polarization gain. Most of these judgments assumed that the average native corrosion potential of 0.33 volts would be measured at each test station when the cathodic protection system is off for at least a month. The average native corrosion potential of 0.33 volts is derived from about 100-150 measurements in the 200 East Area about seven years ago. Ecology Response: Provide text for clarity and enforceability.	-806(4)(C), (4)(a), and -640(2)
35.	Page 4-5 Line 35-36	The text states that, "unless determined to be necessary by analysis, the transfer systems are operated without the heat tracing system." What type of analysis makes this determination? Where is this information located? Give more information. Response: accept, analysis for deciding whether to use heat tracing or not is done as part the waste compatibility program. Prior to any transfer an assessment is made to determine whether there is potential for line plugging. Usually this is based upon potential for having a large temperature differential between the tanks systems that are involved in the transfer. The decision is documented in waste transfer documentation. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
36.	Page 4-5 Line 38, 39	The text states that, "Older lines use a pipe(s)-in-concrete design." These lines are not compliant. The text needs to indicate that these lines will be coming out-of-service by 2005 or they are being upgraded. If Ecology has reviewed these pipes and is using enforcement discretion, provide a reference to the appropriate document/letter. Response: accept, will add wording to indicate when lines will be taken from service. Ecology Response: Provide text for clarity and enforceability.	
37.	Page 4-6 Line 6 - 8	The text states that, "direct-buried lines also are used to transfer waste between tank farms … etc." What direct-buried lines are you asking to be permitted? These lines are non-compliant and are to be removed from service by 2005 or upgraded. If Ecology has reviewed these pipes and is using enforcement discretion, provide a reference to the appropriate document/letter. Response: accept,this text is not accurate and will be deleted. All lines operating post 2005 will be compliant or will have obtained appropriate regulatory variances per Ecology approval. Ecology Response: Provide text for clarity and enforceability.	
38.	Page 4-6 Line 36-38	Remove this paragraph as it belongs in closure. Isolation is a closure action and according to the regulation must be closed within a specified time frame. A schedule for these components must be presented and approved by Ecology. Response: will add sentence at the end; "see Chapter 11 for detail on proposed closure activities." Ecology Response: Remove this paragraph, as the fate of pipelines has not been defined or approved in a closure plan. The pipelines going out-of-service in June 2005 must be stabilized, isolated, and monitored in accordance with M-48-07. Provide the compliance schedule for closure of these components. Provide text for clarity and enforceability.	
39.	Page 4-7 Line 21	Describe the "as is" position for valves? Response: accept, the following text will be added to section: "as is position refers to the fact that pneumatically or electronically actuated valves will remain either open or closed dependent on the position at failure." Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
40.	Section 4.1.3.2.1.4.2	Describe the leak detection system for the RCSTS. Response: accept, will describe leak detection Ecology Response: Provide text for clarity and enforceability.	
41.	Page 4-8 Line 37-40	Please explain the statement that "liquid waste transfer operations are divided into two systems." Called saltwell waste and temporary transfer lines. What are you trying to say? Response: accept, will clarify. Ecology Response: Provide text for clarity and enforceability.	
42.	Page 4-8 Line 46	(See Section 4.1.12 for details) Correct as this section does not exist. Response: accept, Section 4.1.12 will be replaced with Section 4.1.3.3.1.1 Ecology Response: Provide text for clarity and enforceability.	
43.	Page 4-8 Line 46-47	The statement that carbon steel lines are direct buried and will be closed under the SST closure plan is not correct. Only some of the DST system that is pre-2005 will be closed under the SST closure plan. Clarified for enforceability. Response: accept. Appendix 11b indicates which lines will be closed under which system. Text will be revised accordingly. Ecology Response: Provide text for clarity and enforceability.	
44.	Page 4-9 Line 16	The text states that, "transfer lines and routing structures for saltwell waste transfer operations are shown in Appendix 4B." Appendix 4B describes the whole DST transfer system. Where are the specifics for saltwell waste transfer operations? Response: partial accept, Lines 15 and 16 will be deleted. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
45.	Page 4-9 Section 4.1.3.3.1.2	Clarify what the path forward is for the clean out boxes. If they are not going to be used past June 2005, then add that sentence to the text. Where is the information located on the leakage that has occurred in the clean out boxes? Present that information in Appendix 11A. Response: accept, the following text will be added to the end of the paragraph "COBs attached to lines used Post 2005 will be modified to be RCRA compliant (see Section 4.3.6)." Ecology Response: Provide text for clarity and enforceability.	
46.	Page 4-9 Line 41	See Section 4.1.4 for further details. Correct as Section 4.1.4.2.8 is clean out boxes. Response: accept, sections detailing COBs include 4.1.4.2.8, 4.1.4.4.8, 4.1.4.6.9, and 4.1.4.11.3. Section 4.1.4 was cited as the main section that the corresponding subsections could be found. All subsections will be added to the parenthetical statement. Ecology Response: Provide text for clarity and enforceability.	
47.	Page 4-11 Section 4.1.3.3.2.4	This section talks about direct buried lines and that only a few will remain in service past 2005. State the non-compliant direct buried lines that will remain in service past 2005. These lines must have a variance to continue operation. Ecology is only aware of 10 lines that are currently under consideration for a variance from secondary containment. Response: accept text will be revised to accurately reflect agreements with Ecology for using non-compliant lines past 2005. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
48.	Page 4-11 Section 4.1.3.3.2.5	This section advises that only one catch tank (AZ-151) may remain in service beyond 2005. This section notes that if the tank remains in service it will be "upgraded" and if not, it will be "bypassed." This description is too vague. This section should be revised to clearly state that if the tank remains in service it will be upgraded to WAC 173-303 and 40 CFR standards and if not, it will be stabilized and included within the closure plan (i.e. stabilization includes removing all liquids, isolating the unit, installing intrusion protection and some minimal monitoring until closed). Response: accept, AZ-151 will be replaced with a new tank AZ-301 a better description of the disposition of AZ-151 will be provided. Ecology Response: Verify that tank AZ-301 is identified and addressed in the Part A and Part B Permit Application. Provide text for clarity and enforceability. Tank AZ-301 must have an integrity assessment.	
49.	Page 4-11 Line 24	Where is the detail on seal pots that is provide in Section 4.1.3. Provide detail on the seal pots. Response: accept, the main subsection detailing seal pots is 4.1.4 not 4.1.3. This was a typo. The parenthetical will be revised to include; 4.1.4.2.7, 4.1.4.4.7,4.1.4.6.8,4.1.4.8.8, and 4.1.4.11.2 Ecology Response: Provide text for clarity and enforceability.	
50.	Page 4-12 Line 45-47	Clarify the DST components that are non-compliant and plan to continue operation past 2005. Response: accept section will be rewritten to reflect specifically those components that are either seeking exemption/variances from the regulation or have already obtained it. Ecology Response: Provide text for clarity and enforceability.	
51.	Page 4-14 line 19-20	Define what amount may leak before triggering an alarm. Response: accept,will add following text to Section 4.1.4.2.3 Floor Drain: "leak detection trigger volumes can be found in "Transfer Leak Detection Alarm Activation Percent Volume Level" (RPP-13909, Rev. 0) RPP-13909 provides a range of volumes that trigger leak detectors based on pit dimension and geometry. " A table of pits and respective "trigger volumes" will be provided in Rev. 1. Ecology Response: Summarize the detection threshold volumes identified in RPP-13909, Rev. 1, in the text. Reference the document and provide a copy of the reference.	

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
52.	Page 4-14 and 4-15 Section 4.1.4.2.5	Clarify which are the direct-buried lines used to transfer waste. What are these lines used for (e.g., condensate, secondary containment drain lines)? Response: accept text will be revised to accurately reflect agreements in place with Ecology for using non-compliant lines post 2005. Ecology Response: Provide text for clarity and enforceability.	
53.	Page 4-16 Section 4.1.4.2.8 subsection Primary Tank Leak Detection (comments on this section apply to all DST tank farm Primary Tank Leak Detection descriptions)	First paragraph in this section describes configuration of conductivity probe type leak detectors stating that the probes will be maintained at the "proper height" from the annulus floor. "Proper height" is an insufficient description of this location for this essential probe. Revise to add that the probes will be maintained at no more than ¼ inch from the annulus floor. Response: accept, will add that "probe height is maintained 0.25 inches (± engineering tolerances) from the annulus floor for AN, AW, AP, SY and 0.125 for AY and AZ." Ecology Response: Provide text for clarity and enforceability.	
54.	Page 4-17 Line 40-44	It appears from the text that the leak-detection system as described is not functioning as designed. Clarify for enforceability. Response: accept, this description is out-of-date. The master pump shut down has been reconfigured. Wording will be added to clarify pit leak detection capability. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
55.	Page 4-17, line 46- 48	The combination check valve and floor drain assembly looks like a good way to operate the drains. Clarify if this assembly was tested in place upon installation since this tests both the pit and the check valve. Include whether this device requires inspection and how or why not. Include this device in the inspection schedule if necessary. Response: AN Farm pit leak detection has been upgraded per Project W-314. Pit leak detection and drain assemblies are tested together as described in the acceptance test procedure (ATP). A copy of the specific ATP can be provided during the NOD workshop. Ecology Response: Update the text to reflect this response.	
56.	Page 4-18, lines 11 through 13	Paragraph 2 on this page describes a lip or cofferdam to allow leakage to build-up and trigger the leak detector. This section needs to clarify if this lip has been installed where needed. Please also clarify whether the lip has a hole in it, as some of the SSTs have. If a hole exists in the lip it is not compliant. Response: Currently there are pits that are considered non-compliant with regard to RCRA requirements (i.e., leak detection capability). The TPA allows operation of non-compliant systems up until June 30 2005. Post 2005 systems will either be upgraded to meet RCRA requirements or DOE will seek variances from the requirements to allow operation to continue. Text will be revised to describe the system post 2005. Ecology Response: Provide text for clarity and enforceability.	
57.	Page 4-18 Section 4.1.4.3, lines 33 & 34	Figure 4-1 implies it shows the "essential" information. This is not true because it does not show all the essential information. Delete the word "essential." This schematic is important for illustration but design drawing and calculations, and description of operating procedures are also needed to evaluate this permit application. Response: accept. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
58.	Section 4.1.4.4.2 Lines 33 - 35	These sentences describe an "encasement hydrotest riser." Clarify if equipment allows for pressure testing secondary containment. Show detailed drawings, as always. Also, for each section where there is a reference to secondary containment, please describe what equipment exists, or has been designed, or is planned for testing secondary containment for the type of lines that exist at tank farms. Periodic pressure testing of secondary containment, and after a leak of the primary pipe, will be required as part of operations under secondary containment and leak detection per -640(4)(b). It is not required as part of an on-going integrity testing program per -640(2)(e) or (3)(b). Response accept: detail for leak testing secondary containment for the post 2005 systems will be provided in the DST Integrity Assessment Report. Ecology Response: Provide text for clarity in Appendix 4A.	WAC 173-303-640(4)(b), (2)(e), and (3)(b)
59.	Page 4-20 Lines 48 -50	The text states that, "the leak detector may not detect small amounts of leakage." Quantify the amount of waste that could leak before being detected. Response: reject, currently there are pits that are considered non-compliant with regard to RCRA requirements (i.e., leak detection capability). The TPA allows operation of non-compliant systems up until June 30th 2005. Post 2005 systems will either be upgraded to meet RCRA requirements or DOE will seek variances from the requirements to allow operation to continue. Text will be revised to describe the system post 2005. Ecology Response: The Ecology NOD is asking that DOE clarify the statement on leak detection. Explain the leak detection capability in the pits that DOE has applied for a final status permit.	
60.	Page 4-35 Section 4.1.4.9 Lines 38 -41	This paragraph describes the use of mixer pumps in SY-101 as a means to control gas buildup. The use of mixer pumps is not described in procedures to prevent hazards or other parts of this chapter as a means of control for either hazardous or toxic emissions. Clarify if this statement is correct. Include a description of the procedures critical elements to prevent hazards. Response: accept, previously a pump was used to mix the waste in an attempt to mitigate spontaneous and induced buoyant-displacement gas-release events. Based on resolution of the episodic gas release events in the tank, this is no longer a requirement. This text was left over from the previous permit application and will be removed. Ecology Response: Provide text for clarity and enforceability.	

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
61.	Page 4-37 Section 4.1.4.10.3 Lines 25-26	Again, as with other sections in this chapter, please describe what direct buried lines you are talking about. Is this the ones where the secondary containment does not penetrate the pit wall? Response: accept, section will be revised to reference section 4.1.7 "Variance from Secondary Containment" Ecology Response: Provide text for clarity and enforceability.	
62.	Page 4-38 Section 4.1.4.11.1 Lines 24-25	Certainly the drains are part of the secondary containment system, but they must be testable and must be included in the integrity assessment. Certain drains, such as vertical drains may not need to be tested, but long drain systems with bends and mild (near vertical) slopes must be testable or otherwise monitored. Describe the secondary containment drains, which ones are available for testing, length and configuration (slope, bends, angles, etc.) Response: accept, text will be revised as follows: "A January 2003 letter (Lyons to Rasmussen) indicates Ecology's agreement with DOE that drains are considered an extension of secondary containment and therefore need only be single-wall construction. Testing of secondary containment will be addressed in the Integrity Assessment Report March 2006. Ecology Response: Provide text for clarity and enforceability.	
63.	Page 4-38 Section 4.1.4.11.3	Lines 41 through 43 discuss a plugged floor drain. What is plugging the floor drain? Is this an isolated drain, or plugged by waste. Please clarify. Response: accept, this text will be deleted. All COBs except for a few in AN and AW farms are being isolated and taken out of service (See Section 4.3.6) Ecology Response: Provide text for clarity and enforceability.	
64.	Page 4-38 Section 4.1.4.11.3 Lines 45 -47	I do not understand the sentence, "The Clean out Boxes (COBs) can contain… from any leakage…" What is this sentence supposed to say? Are the COBs contaminated? Will the COBs remain in service after 2005? Response: accept, the sentence will be revised to state that "during normal operations COBs can contain liquid from any leakage or cleanout plugs from respective lines. However all COBs will either be taken out of service or upgraded to meet RCRA standards for secondary containment/leak detection." Ecology Response: Provide text for clarity and enforceability.	

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
65.	Page 4-39 Section 4.1.4.12 Lines 12 -14	What is the purpose of the interchangeable leak detection pump? Is there liquid stored or infiltration into the pit that must periodically be removed? Certainly in the event of a leak from secondary containment into the pit a pump would need to be available. Clarify what the purpose of this pump is and whether it is used periodically to remove liquid from around the outside of the secondary hull that drains to this location. What does it mean that it is interchangeable? Response: accept, the purpose is to pump liquid from the leak detection pit. The liquid source is primarily infiltration due to precipitation. There is only one 'interchangeable pump' for all three SY tanks because of the low probability that more than one tank would require pumping at any given time. This configuration is the same for all DST farms. Text will be revised to better reflect this. Ecology Response: Provide text for clarity and enforceability.	
66.	Section 4.1.5	What is said here is good except it misses the first fundamental requirement. State the purpose of this assessment is," For each tank system, the owner or operator must determine that the tank system is not leaking or unfit for use." Add this statement into the text. Response: accept, will add the following sentence to the beginning of the paragraph; "For each tank system, the owner or operator must determine that the tank system is fit for use". Ecology Response: Provide text for clarity and enforceability.	WAC 173-303-640(2)(a)
67.	Section 4.1.5.1	Describe how it will be determined that the secondary piping will not leak or is "unfit for use." Clarify if the newer lines have had both the primary and the secondary pressure tested before being put into service. The pressure testing regimen is part of the Integrity Assessment Plan. Response: reject, please see Appendix 4A (DST Integrity Assessment Plan) Task 7A-Assess Active Underground Transfer Piping. Ecology Response: State in the text that Appendix 4A (DST Integrity Assessment Plan) Task 7A-Assess Active Underground Transfer Piping addresses the methodology that will be used to determine secondary piping system integrity.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
68.	Section 4.1.5.1	This implies some direct-buried lines are part of the DST system. Are you referring to the potion of double-walled lines where the secondary does not pass through the pit wall? If Ecology agreed to anything about this (re: last sentence) a reference needs to be included here. Response: accept,reference is to those lines where secondary containment does not extend through the pit wall. Lines 44-45 will be revised to clarify this point. Ecology Response: Provide text for clarity and enforceability.	
69.	Page 4-41 Line 39-40	The ages of the tank are not listed in Table 4-2. However, the dates when the tanks became operational are listed. Clarify text to reflect the Tables titles. Response: accept,text will be revised to state the following; "The tanks in the DST System were constructed between 1968 and 1986. Initial service dates are listed in Table 4-2. Based on the initial service dates, ages of the tank systems range from 18 to 33 years." Ecology Response: Provide text for clarity and enforceability.	
70.	Page 4-42 Line 8	Clarify where Section 4.1.3 gives detail on the monitoring and control system. Describe these systems. Response: accept, reference to Section 4.13 is a typo. This sentence will be revised to state that detail for monitoring and control systems is provided within Sections 4.1.8. and 4.1.9. Ecology Response: Provide text for clarity and enforceability.	
71.	Page 4-42 Line 39 - 47	The information in this paragraph is no longer correct. The AY and AZ farms now have ENRAFs for leak detection. Change text to reflect the current leak detection system at the AY and AZ farms. Response: accept, will update application to include accurate description of tanks systems that utilize the Enraf level monitoring system Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 4	Regulatory Citation
72.	Page 4-44 Line 4	Section 4.3.5 does not talk about new leak detection probes. Provide the information. Response: accept, reference to Section 4.3.5 will be deleted. Additional information on new leak detection probes will be added. Ecology Response: Provide text for clarity and enforceability.	
73.	Page 4-45 Line 22 - 29	Provide the information on ENRAFs for all the other double shell tanks or state how they differ. This information seems to only address the AP farm. Response: accept, section will be expanded to include other DST systems Ecology Response: Provide text for clarity and enforceability.	
74.	Page 4-55 Section 4.2	This section references a "LR-56 truck". I think the LR-56 truck is long gone from Hanford. Correct the sentence for accuracy. Response: accept, text will be revised to delete description of this piece of equipment. Ecology Response: Provide text for clarity and enforceability.	
75.	General, Regarding Projects Page 4-62	Explain how the DST projects in this application relate to the M-48 DST integrity assessment. All DST system components must have an integrity assessment that has been signed by a certified IQR PE. Response: accept, Completion of Waste Retrieval Supporting Projects described in Section 4.3 will help define the post 2005 DST system. The current the IA plan (RPP-17266 Rev. 0) states that the IA and IA report will address the post 2005 DST system only. The relationship between projects and the IA report is that the resulting post 2005 DST configuration must be certifiable by an IQRPE. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 4A	Regulatory Citation
1.	Appendix 4A General	The report "Evaluation of Insulating Concrete in Hanford Double-Shell Tanks" RPP-19097, Rev. 0 makes several recommendation to evaluate any trend toward deterioration of the insulating concrete of the Double-shell tank. Include these recommendations in the ongoing tank integrity program. Response: reject, any reports, drawings or other technical data used for the integrity program will be done so at the discretion of the responsible IQRPE. As such RPP-19097 may or may not be used for issuance of the DST IA report due March 2006. Ecology Response: The intent of the comment was to provide some insight in the fact that there are previous evaluations that would be beneficial in performing the required integrity assessment. WAC-173-303-640 part 2c states that the "assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider … results of a leak test, internal inspection, or other tank system integrity examination …." Information and recommendations provided in the referenced report (RPP-19097) will be taken into consideration by Ecology during the review of the pending Integrity Assessment report due in March 2006.	
2.	General	The integrity assessment must characterize the effects of leaks and spills (from tank pits and operations) on the secondary containment. This information is important to assure that has not been compromised. Response: noted Ecology Response: The integrity assessment must be performed to characterize the effects of leaks and spills from tank pits and ancillary equipment to assure that the secondary containment has not been compromised. In the system descriptions, such as for the 204-AR facility, integrity assessment must be performed on the five vessels within the facility as well as associated piping, sumps, and pits. System description sections within the permit application (e.g., Chapter 4 sections) need to reference plans to perform system integrity assessment and cross-reference to Appendix 4A for all secondary containment systems.	
3.	General	Seismic design of piping systems: The plan should clarify what magnitude earth quake the piping and riser penetrations of tanks can survive. Response: accept, seismic analysis will utilize values for vertical and horizontal ground acceleration based on appropriate engineering codes and standards. The next revision of the plan will include additional details. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 4A	Regulatory Citation
4.	Page 20 6th Paragraph	Explain why the 241-AY tanks were chosen as the model to represent the structural analysis for all DSTs. How does the 241-AY tank contain the bounding features for all 28 DSTs? Response: accept, AY was chosen because of the following reason: 1) It has seen some of the highest temperatures in the history of tank farms. 2) All other DSTs have more robust design features. The exception being the maximum compressive strength for the insulating concrete; for AY it is 200 psi and for SY it is 130 psi. Therefore for the majority of the anaylsis 241-AY is the bounding case. Ecology Response: Incorporate this selection criterion into the text and provide revised text for clarity and enforceability.	

No.	Position in Document	Comments/Response Appendices 4B/C/D	Regulatory Citation
1.	Appendix B	Provide a table of content and directory summary of the appendix. The intent is to ensure the latest information is being provided and reviewed. For example, Appendix B has a summary but does not include a listing of the B227 drawings that were provided, identifying issue date, revisions, etc.	
2.	Appendix C	Provide a table of content and directory summary of the appendix. The intent is to ensure the information being provided is clear and concise.	
3.	Appendix D	Appendix D provides just a listing of current drawings and does not adequately identify those piping systems that do not have cathodic protection or the life cycle impacts that may result from those systems not having cathodic protection.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 5	Regulatory Citation
1.	Chapter 5, General Comment	Previously, general RCRA Part B permit application informal comments were provided by Ecology regarding the placement of the post-closure groundwater monitoring program description. As the DST system is not a "regulated unit" (see WAC 173-303-040 definition), groundwater monitoring is not required. Therefore, the groundwater monitoring program description included in Chapter 5 of the RCRA Part B permit application is not required. In addition, and related to postclosure groundwater monitoring, WAC 173-303-640(8)(b) requires the owner/operator to first "demonstrate that not all contaminated soils can be practicably removed or decontaminated..." prior to performing post-closure care and monitoring. To date, the U.S. Department of Energy (USDOE) has not made this demonstration in relation to the DSTs. Therefore, a post-closure care and monitoring plan is not required at this time. As such, all post-closure groundwater monitoring program descriptions currently provided in Chapter 5 should be removed/deleted from the application. Response: accept, will remove Ecology Response: It is unknown at this time if post-closure groundwater monitoring will be required. Although this deficiency will be resolved via Chapter 11, provide text for Chapter 5 that states that it is unknown at this time if post-closure groundwater monitoring will be required. Recommended text for Chapter 5 is: "As the DST system is not a 'regulated unit' (see WAC 173-303-040 definition), groundwater monitoring is not required. However, if it is demonstrated that not all contaminated soils can be practicably removed or decontaminated as required in WAC 173-303-640(8)(a), then the DST tank system must closed in place and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills. To date, this demonstration has not been made. Therefore, a post-closure groundwater monitoring plan is not required at this time."	WAC 173-303-040, WAC173-303-640(8)(b)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 5	Regulatory Citation
2.	General Comment	Previously, general RCRA Part B permit application informal comments were provided by Ecology regarding Appendix 11A. These comments addressed the RCRA Part B permit applications deficiencies in relation to information provided regarding releases, potential contamination resulting from those releases, and the lack of characterization regarding the potential contamination resulting from those releases. Should it be determined that releases have occurred and/or characterization information indicates contamination has resulted from the operation of the DST system, Ecology may impose vadose zone and/or groundwater monitoring (Prior to closure and/or post closure) related to the DST system for the purpose of characterizing impact and/or monitoring contamination migration. The application must identify this scenario as one in which vadose zone and/or groundwater monitoring may be required. It is appropriate for this identification to be placed in Section 5. It is also appropriate that an identification be included that indicates vadose zone and/or groundwater monitoring (if required) would be imposed via RCRA corrective action authorities. Response: reject, Ecology has indicated through conversation that the formally transmitted NOD comments supersede the previously submitted informal comments. If this is not the case then Ecology needs to communicate this. Currently there is no plan by DOE/contractors to perform operational monitoring that is not explicitly called out by the regulation. WAC-173-303-640 does not require groundwater or vadose zone monitoring for operating tank systems and therefore no scenarios representing the need for operational ground water monitoring or vadose zone are planned to be added to the DST Part B application. Ecology Response: Past releases have occurred within the boundaries of DST Farms. An example is the 242-S Evaporator overflow. Even though WAC-173-303-640 does not require groundwater or vadose zone monitoring for operating tank systems, past mishaps and/or releases mandate that adequate information and characterization be provided. If applicable, groundwater or vadose zone monitoring may be justified via WAC 173-303-646 and/or -640(7). The application must identify when characterization information will be provided.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 5	Regulatory Citation
3.	General Comments	An additional scenario as one in which vadose zone and/or groundwater monitoring may be required is related to the design and adequacy of the DST system's secondary containment. To explain, regulatory requirements may be interpreted to mean the system must be capable of detecting the failure of both the primary and secondary containment, or, alternatively, the system could be capable of detecting *any* release of hazardous waste into secondary containment. It is also noted that USDOE guidance (Special Facilities DOE6430.1A 4-6-89) for typical confinement for radioactive liquid waste facilities includes tertiary barriers (which can include "soil barrier" which is defined as an engineered backfill material and natural setting surrounding the waste storage tanks with a monitoring capability available of detecting leakage from the storage tanks into the soil). During Ecology's processing of the DST RCRA Part B permit application, if it is concluded that the tank system is not designed or operated (as described in the DST draft Part B permit application) to provide a satisfactory level of leak detection to preclude unacceptable releases to the environment, vadose zone and/or groundwater monitoring may be imposed as a DST system operation condition. The application must identify this scenario as one in which vadose zone and/or groundwater monitoring may be required. It is appropriate for this scenario to be described in Section 5 of the DST RCRA Part B permit application. Response: reject, until all DST system upgrades have been completed and the integrity assessment has been prepared and certified by an IQRPE, assertions made regarding unacceptable releases during operations seem premature. Moreover Ecology's assessment of the DST design and operation should be made with respect to WAC-173-303 and appropriate Federal RCRA standards not with respect to DOE orders (Please note that DOE O 6430.1A 4-6-89 has been replaced by DOE O 420.1 10-13-95.) WAC-173-303-640 does not require operational monitoring for tank systems therefore scenarios discussing this possibility are not planned for the DST Part B application. Ecology Response: Regulatory requirements may be interpreted to mean the system must be capable of detecting the failure of both the primary and secondary containment, or, alternatively, the system could be capable of detecting any release of hazardous waste into secondary containment. It is also noted that DOE guidance (Special Facilities DOE O 420.1) for typical confinement for radioactive liquid waste facilities includes tertiary barriers (which can include "soil barrier", which is defined as an engineered backfill material and natural setting surrounding the waste storage tanks with a monitoring capability of detecting leakage from the storage tanks into the soil). During Ecology's processing of the DST RCRA Part B permit application, if it is concluded that the tank system is not designed or operated (as described in the DST draft Part B permit application) to provide a satisfactory level of leak detection to preclude unacceptable releases to the environment, vadose zone and/or groundwater monitoring may be imposed as a DST system operation condition. The application must identify this scenario as one in which vadose zone and/or groundwater monitoring may be required.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 5	Regulatory Citation
4.	General Comments	An additional scenario as one in which vadose zone and/or groundwater monitoring may be required is related to the DST integrity assessment that will be performed to satisfy the Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-048-14. If the DST integrity assessment is found to provide insufficient information and/or assurances of the DST system's integrity during waste management and/or operation of the DST system, vadose zone and/or groundwater monitoring may be imposed to provide additional assurances of the DST"s integrity during dangerous waste management and operation of the DST system. The application must identify this scenario as one in which vadose zone and/or groundwater monitoring may be required. It is appropriate for this scenario to be described in Section 5 of the DST RCRA Part B permit application. Response: reject, please see response to general comment #3 above. Also, in comment #1 Ecology requests that the groundwater plan be removed. Ecology Response: Note: Comment #1 dealt with a **post-closure** groundwater monitoring plan which is not required at this time. Comment #1 did **not** address a DST operational requirement to monitor the vadose zone and/or groundwater resulting from component integrity determinations. Past releases have occurred within the boundaries of DST Farms. Even though WAC-173-303-640 does not require groundwater or vadose zone monitoring for operating tank systems, past mishaps mandate that groundwater or vadose zone monitoring may be justified. If the DST integrity assessment is found to provide insufficient information and assurances of the DST system's integrity during waste management and/or operation of the DST system, vadose zone and/or groundwater monitoring may be imposed to provide additional assurances of the DST's integrity during dangerous waste management and operation of the DST system. The application must identify this scenario as one in which vadose zone and/or groundwater monitoring may be required.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
1.	Section 6.3.2	Include text to reflect when and how often there is visual inspection of the emergency and safety equipment. Response: accept, will add that alarms panel inspections are performed daily. (Appendix 6A.14 see page 6A-40). Ecology Response: Provide text for clarity and enforceability.	
2.	Section 6.2.3.4	Include text to reflect when and how often the alarm panel inspection occurs. Referencing the appropriate appendix would suffice. Response: accept, will add that visual inspection of the emergency equipment ranges from weekly to monthly (Appendix 6A, pages 41-43) Ecology Response: Provide text to distinguish the basis for alarm panel inspection occurrences, e.g., those done weekly and those done monthly, etc.	
3.	Section 6.4.4	Control of air emissions: This section needs to include more detail to be useful. Please include much more detail on how emissions are actually controlled and provide data on releases of gaseous DW or EHW. Note that the word "control" generally refers to engineering controls in the context in which it is used. OSHA regulations also require engineering controls to be used "when feasible." The performance standards under RCRA also required a maximum level of control. Detail must be included in two additional places: waste characteristics needs to include the physical processes that lead to release of toxic emissions since such data is key to how engineering and administrative controls will be implemented, the history of releases is key to demonstrating the effectiveness of these controls implemented to-date all releases to air must be documented in this report. For example: if spontaneous bubble rise raises the level of air toxics in the dome space, how would monitoring be able to prevent exposures to humans given the sudden nature of such an occurrence? The effects of diffusion-driven processes, if these are sources of toxic emissions, the effect of tank operating processes need to be factored in. That is, mixer pumps could cause diffusion driven release process to increase because the concentration gradient changes drastically, and possibly because cavitation in the pumps causes lower vapor pressure components to be stripped out of the waste, tank filling generates aerosols, some components will be vaporized or concentrated above what may be expected or anticipated based upon present characterization, this may also cause reactions or effects that generate higher concentration of contaminants, or different contaminants, than expected (e.g., source of H2S, measured in '93 per OR but not included as constituent of concern in later characterization plans).	per -300, -170, -070 to -110, -395 WAC-173-303-283

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
	Comment No. 3 continued	Response: partial accept, air emissions for the DSTs are regulated by the site wide air operating permit (AOP). Appropriate sections of the AOP will be provided during the NOD workshops Ecology Response: WAC-173-303-283 addresses Performance Standards, facility standards for design, construction, and maintenance of equipment for the health and safety of employees and the public. It is recognized that the current AOP will address NOC emission standards for all types of operations, based on bounding concentrations. At issue here is the performance standards used in the design, construction, and maintenance (frequency and methodology maintenance will be performed on the air emissions equipment) that assure the emission standards addressed in the AOP remain compliant. Provide text for clarity and enforceability.	
4.	Section 6.4.4	Section 6.4.4, page 6-9, lines 25- 28: In conjunction to references to "…numerous state and federal regulations," in reference to WAC 173-400, and –460 please include the statement that there are "no controls" for toxic gaseous releases on any of the tank farm stacks. Response: reject, please see response to #3 above Ecology Response: Section needs to address Performance Standards, see Ecology Response to #3 above. --- Section 6.4.4, page 6-9, lines 25- 28: Please define TFC. Response: accept, "TFC" is the Tank Farm Contractor. Will define the acronym within text. Ecology Response: Accept. --- Section 6.4.4, General Comment: This section does not describe the use of atmospheric dispersion and stack height to limit breathing-zone concentrations of gaseous air toxics. Whether dispersion is used intentionally or unintentionally, how the contractor controls the dispersive effect is important. Please include a description of how exclusion zones are established during a planned and unplanned Gas Release Event, and how the zones are monitored and controlled to protect human health. Please describe any instance when this type of control may have failed in the past (e.g., gas release events, SY-101 initial mixer pump startup, C-106 sluicing). Describe in detail the actions taken during successful (dilution and removal of SY-101 waste) and unsuccessful operations. Response: partial accept, please see response to #3 above	WAC 173-303-395(1)(b) and -283(3)(i)

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
	Comment No. 4 continued	Ecology Response: Provide text addressing the performance standards used in the design, construction, and maintenance of the air/off-gas emissions/handling equipment. --- Section 6.4.4, General Comment: The section describes monitoring, but does not describe the actions taken if constituents of concern or instruments register readings above acceptable levels while work is being conducted. Please describe how tank farms are evacuated when readings indicate unacceptable contamination levels. Please indicate how work is stopped and conditions are made safe prior or during evacuation. Please indicate how many times since records were kept have the tank farms work been halted or hindered because of incidents of vapor release. Response: accept, the Air Operating Permit establishes acceptable annual emissions rates and overall monitoring requirements. In the event that a permit deviation (emission excedance occurs) the following reporting requirements must be met: AOP Section 4.5.1 "Deviations, which represent a potential threat to human health or safety, shall be reported promptly or as soon as possible. Promptly, as defined here, means as soon as possible following discovery[1], but in no case later than 12 hours after discovery1 of a potential threat to human health or safety. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the immediate reporting requirements of WAC 173-401-615(3)(b), WAC 173-400-107(3) and WAC 246-247-080(5) (state only). 1 Qualitative determination that a potential threat to public health or safety exists or existed after an evaluation of pertinent information." The TFC has programs and procedures to anticipate, evaluation, recognize, and control hazardous air emissions to ensure the health and safety of the workers and public. The TFC operates both a work planning process and an industrial hygiene program that address chemical releases. During the work planning process, potential releases and personnel exposure are evaluated and appropriate controls are specified based on the nature of the work to be completed. The TFC's hierarchy of controls used in designing hazard mitigation is engineering the work to eliminate the hazard, administratively limiting exposure to hazards, and finally assigning personal protective equipment. Ecology Response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
5.	Page 6-5 Section 6.2.3.6	Rename the section to Tank System - Response to leaks and spills. The title of Corrective Action implies that the regulations are from WAC 173-303-646. Response: reject, use of the title "corrective action" for this section comes directly from the Ecology Guidance document Publication #95-402. The first sentence in the section provides the correct citation: "Unless the owner/operator satisfies the following requirements [WAC-173-303-640(7)] the tank system must be closed in accordance with the DST system closure plan." Ecology Response: Reject. The title is confusing, change as originally stated. Ecology guidance documents are just that, guidance only.	
6.	Chapter 6, Checklist Item F-1a(2)	Clarify what warning signs, if any, are associated with the DST system and are located outside of enclosed DST system areas. Response: reject, please refer to section 6.1.1.3 for description on location of warning signs. Ecology Response: Accept.	WAC 173-303-310 and WAC 173-303-395(6)
7.	Chapter 6, Checklist Item F-3a(4)	Clarify how sufficient flow, volume, and pressure for water and foam was determined, and if this was based upon hazard analysis. Reference the document where the hazard analysis was done. With regard to building sprinkler systems: provide specific details on the location of these systems (which buildings). Clarify if the facility has an approved water system plan as required under WAC 246-290 and the Safe Drinking Water Act. Response: accept, this information is specified in the site wide Hanford Fire plans. Plans will be presented during the NOD work shops, and a summary of this information can be provided in the DST application. Ecology Response: Provide summary of Hanford Fire plans in the text.	WAC 173-303-806, -340(1), (2)
8.	Checklist Item F-4(a), (b)	Describe how operations will prevent run-off from dangerous waste handling areas to other areas of the facility or environment during operations (e.g., large equipment removal and replacement). Examples would include spray ring devices for decon, flexible receiver to bag large waste out, etc. Response: accept, run-off prevention techniques are determined during the work planning process and are unique to the specific job being performed. A summary of techniques could be written into the application but they would have to be very generic to avoid frequent permit modifications. Ecology Response: Provide a summary of run-off prevention techniques.	WAC 173-303-806(4)(a)(viii)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
9.	Checklist Item F-4d	Clarify if the fire water system for fire hydrants has backup power. Response: accept, fire control for tank farms is provided through the Hanford Fire Department tanker trucks. The TFC does not provide back up power for fire hydrant located in the vicinity of the Double Shell Tank System Ecology Response: Provide text for clarity.	WAC 173-303-806(4)(a)(viii) (D)
10.	Checklist Item F-5	Clarify whether the tank system is already storing incompatible wastes that generate flammable and toxic gases and mists (vapors). Clarify if the degree of toxicity of the trapped gases in the waste as based on characterization and toxicological assessment of this specific phase. Then describe in detail how WAC 173-303-395(1)(b)(i), (ii), (iii), and (iv) will be complied with, including controls for flammability and controls to prevent uncontrolled toxic emissions. Response: reject this information is already provided in the appendix B of the Waste Analysis Plan (please chapter 3 and appendix 3A of the application) Ecology Response: Provide reference in the text to the given sections for clarity.	WAC 173-303-100, WAC 173-303-395(1)(b)(i), (ii), (iii), (iv), WAC 173-303-640(10)
11.	General	Clarify how the system will be designed and operated to prevent uncontrolled mists and gases that threaten human health and the environment. Response: reject, response for comment # 6 above. Ecology Response: Comment #6 is not applicable, as it deals with warning signs. WAC-173-303-283 addresses Performance Standards and the design, construction, and maintenance of equipment and systems is done to prevent uncontrolled mists and gases being released. The comment deals with the "design basis" that was implemented to prevent uncontrolled mists and gases released (e.g., negative pressure to the atmosphere, alarm systems, etc.). Provide information on the maintenance of system seals, etc. and the operations/abilities of the off gas system.	WAC 173-303-640(10), WAC 173-303-395(1)(b)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Chapter 6	Regulatory Citation
12.	Checklist Item F-2d(2)(b), F-4	For tanks and piping, if the primary containment starts leaking what immediate actions does USDOE intend to take? Besides the obvious initial action to shut down and prepare for or initiate emergency pumping, what other actions are planned? Clarify if the WAC requirement for immediate cleanup and repair, or closure of the failed component will occur. Clarify whether "interim stabilization" and "isolation" will occur. If the option to interim stabilizes and isolate the component is planned, how will it be determined no contamination has occurred outside of secondary containment? Clarify if there are components of the SST system that were previously classified as DST components, but have failed, and were not immediately cleaned up. For each transfer segment, tank, pit, and drain show how the component will be operated to detect and prevent or mitigate "any" leak to the environment over the operating life of the facility. What is the minimum detectable leak to the environment under current design and operation strategies? Response: partial accept, Cessation of use and emergency pumping (isolating the system and pumping below the leak line) is a primary response to a leaking tank system (see Appendix 7B). Requirements for bringing an 'unfit-for-use' tank system back into service are taken directly from WAC-173-303-640(7) to the extent applicable. Other assessments and corrective actions required by the AEA must also be performed. RCRA response actions must not be in direct conflict with requirements under the AEA. Interim stabilization is a planned "pre-closure" activity reserved for tanks that will not be used in the future. Interim stabilization should not be confused with response actions. Spill response actions are identified in section 7.2.5 of the appendix 7A. Ecology Response: Section 6.0 is essentially providing information on the designs and procedures in place to prevent hazards. For example, for tanks and piping, if the primary containment leaks, describe all actions that USDOE will take to mitigate the spill. Clarify how DOE will meet WAC 173-303-650(7) and -806(4)(a)(viii). Clarify how "interim stabilization" and "isolation" will occur and how it will be determined so that no contamination has been released outside of secondary containment. For each transfer segment, tank, pit, and drain, show how the component will be operated to detect and prevent or mitigate "any" leak to the environment over the operating life of the facility. Clearly identify what is the minimum detectable leak to the environment under current design and operation strategies. When addressing Spill Response, reference that the response actions for a spill are identified in Section 7.2.5 of Appendix 7A.	WAC 173-303-640(7), WAC 173-303-806(4)(a)(viii)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 6A	Regulatory Citation
1.	Appendix 6A General	What is the intended purpose of this Appendix? Response: accept, The purpose of this document is to meet the following WAC requirement by establishing an inspection schedule for tank system components. Additionally it provides corrective measures for issues that are identified during inspections. WAC-173-303-640 (6) requires the following: *(a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.* *(b) The owner or operator must inspect at least once each operating day:* *(i) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;* *(ii) Data gathered from monitoring any leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and* *(iii) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of dangerous waste (e.g., wet spots, dead vegetation).* *Note: WAC 173-303-320 requires the owner or operator to remedy any deterioration or malfunction he finds. Subsection (7) of this section requires the owner or operator to notify the department within twenty-four hours of confirming a leak. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of a release.* *(c) The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:* *(i) The proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and*	

No.	Position in Document	Comments/Response Appendix 6A	Regulatory Citation
		(ii) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e., every other month). Ecology response: Provide text for clarity and enforceability.	
2.	General	Provide a table of contents for Appendix 6A. Response: accept, a table of contents will be provided. Ecology response: Provide table of contents.	
3.	Page 6A-3	In column titled "Equipment Information" first box regarding AN tanks, a statement is made that "conductivity probes not at specified elevation". Explain this statement. Is this a current condition of the equipment requiring repair? Response: accept, Appendix 6A will be edited for this type discrepancy. Ecology response: Provide text for clarity and enforceability.	
4.	Tables 6A-1 through 6A-12	Descriptions of frequencies at which monitoring equipment is calibrated or functionally tested to ensure operability is either inconsistent or does not appear at all for most equipment. For example, the Inspection and Monitoring column notes that annulus leak detectors for DSTs are functionally tested every 182 days; however, no reference is made to functionally testing the various types of leak detectors in catch tanks, transfer lines, DCRTs, valve pits or other tank system equipment. Add the information. Response: accept, row for "catch tanks and miscellaneous vessels" will be added with reference to OSD-T-151-00031. Ecology response: Provide text for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 6A	Regulatory Citation
5.	Table 6A-13, Cathodic Protection	The Condition/Required Response column lists rectifiers requiring maintenance or repair; however, the "response" is simply reporting to management rather than providing schedules for repair. Are the rectifiers currently inoperable or maintained? Also, this table does not reference calibration schedules for rectifiers (i.e. tap settings annually adjusted to survey test results form test stations). Add this information to the table. Response: reject, the operator performing the inspection typically is not the individual that will perform the corrective action unless they are trained to do so. The shift supervisor is responsible for assessing whether or not the identified condition warrants further action. Once a condition is identified as a problem, the facility manager is responsible for establishing a work package (including schedule) to resolve the problem. Appendix 4D lists all currently active rectifiers within the DST system and the protected lines associated with each rectifier. All rectifiers are maintained pursuant to appropriate NACE standards. *(ii) All sources of impressed current must be inspected* ***and/or tested, as appropriate,*** *at least bimonthly (i.e., every other month).* Table 6A-13 identifies the requirement for bi-monthly inspection. Testing is done pursuant to NACE standards. Ecology response: Provide this information in the text portion of the appendix for clarity and enforceability.	
6.	Table 6A-13 Cath/Protection	Polarization potential surveys for the cathodic protection system must be included as part of the inspection schedule. Response: reject testing is not a required element of the dangerous waste inspection schedule Please see response to general comment 1 above. The cathodic protection system testing procedure, 3-CATH 357, is scheduled to be performed annually, through the planned maintenance program. During the performance of the procedure, the negative polarized potentials and the negative (cathodic) potentials are measured at every test station being during the surveys. Ecology response: Provide this information in the text portion of the appendix for clarity and enforceability.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 6A	Regulatory Citation
7.	Appendix 6A	Appendix 6 does not reference temporary equipment that may be used in the DST system (i.e. temporary, hose-in-hose transfer lines). Provide information in the text. Response: accept Ecology response: Provide text for clarity and enforceability.	
8.	Appendix 6A	Provide text for the leak detection devices that states, "The frequency of calibration for leak detection devices will not exceed 12 months. The calibration of leak detection devices will occur more often that every 12 months based on manufactures recommendations. Response: please provide regulatory basis for this requirement. Ecology response: WAC-173-303-283 Performance standards. General performance standards must be used to determine whether more stringent facility standards should be applied than those spelled out in WAC 173-303-280, WAC-173-303-290 through WAC 173-303-400, and WAC 173-303-600 through WAC 173-303-692.	

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
1.	Appendix 11A, Page APP 11A-1, Lines 3-4	The text states: "No liquid releases have occurred from the DSTs or 204-AR." Washington Administrative Code (WAC) 173-303-040 definition of "tank" is: "a stationary device designed to contain an accumulation of dangerous waste, and which is constructed of non-earthen materials to provide structural support". The WAC 173-303-040 definition of "tank system" is "a dangerous waste storage or treatment tank and its associated ancillary equipment and containment system". The 204-AR is considered "ancillary equipment" rather than a "tank". Remove "or 204-AR" from the first sentence. Response: partial accept, text will be reworded to describe 204-AR as ancillary equipment, for which no "known releases" have been identified. Ecology response: Provide text for clarity.	806(4)(a)(xxiii) and (xxiv)
2.	Appendix 11A, Known Releases, Page APP 11A-1, lines 3-4	The text states: "No liquid releases have occurred from the DSTs or 204-AR." A more accurate statement is: "No known liquid releases have occurred from the DSTs." Unless the leak detection capabilities are agreed to satisfy WAC 173-303-400(3) and, by reference, 40 Code of Federal Regulations (CFR) 265.193 standards, the statement, as written, is not supported. Re-write the sentence to indicate that there are no "known" releases from the DSTs. Response: accept, text will be revised to state that no "known releases" have been identified. Ecology response: Provide text for clarity.	806(4)(a)(xxiii) and (xxiv)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
3.	Appendix 11A, Known Releases, Page APP 11A-1, line 6	General Comment. The text states: "Release information is tracked through a sitewide database." It should be noted that the sitewide database is not easy to use and all the information provided in Appendix 11A regarding known releases could not be confirmed and/or evaluated. To explain, unplanned release UPR-200-W-20 is not numerically listed in Hanford Site Waste Management Units Report (DOE/RL-88-30, Rev. 12). When the WIDS database was searched for the UPR-200-W-20, the description of the unit was found. As another example of how the WIDS database is not easy to use, unless it can be ascertained that the release occurred in a DST system component, it is difficult to know if the unplanned release is within the DST system. It is recommended that the information in this appendix be considered "pending" until such time that Ecology reviewers may improve their capabilities in confirming and evaluating information via the use of Hanford Site databases. Response: reject,WIDS report for UPR-200-W-20 includes information not just on the unit description but on the spill itself. However there is some uncertainty associated with the exact point of release. Section 3.5 of the TPA specifies WIDs as being the official data base for the waste sites and/or releases within the Hanford site. DOE/RL-88-30 is not identified in the TPA as being part of the WIDs system and therefore should be considered as only part of the existing body of information. The content of appendix 11A includes all sites thought to be associated with the DST system based on an extensive search of the WIDs data base. This list can be considered for further refinement through the NOD process. Ecology response: The information in this appendix is considered "pending" until Ecology is briefed and assured that the information in Appendix 11A is complete, accurate, and fully documents all known releases within the DST farm boundaries. Suggested topics for briefing are: • Releases in other units that impacted the DST farm • Leaks from DST equipment slated for SST closure • Extent of release and dangerous constituents present. • Impacts or potential impacts to human health and the environment • Characterization of the release sites	806(4)(a)(xxiii) and (xxiv)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
4.	Appendix 11A, Known Releases, Page APP 11A-1, line 6	General Comment. It is recommended that an identification that the WIDS database includes an identification of solid waste management units (SWMUs) be included in the appendix with an explanation that the entire DST system is considered a SWMU. Response reject: WAC-173-303-040 defines SWMU by the following. "Solid waste management unit" or "SWMU" means any discernible location at a facility, a**s defined for the purposes of corrective action,** where solid wastes have been placed at any time, irrespective of whether the location was intended for the management of solid or dangerous waste. Such locations include any area at a facility at which solid wastes, including spills, have been routinely and systematically released. Such units include regulated units as defined by chapter 173-303 WAC. Usually terms SWMU and corrective action is associated with non-permitted releases to the environment. Therefore DOE does not agree that the entire DST system can be classified as a SWMU except POSSIBLY those areas identified in WIDS and appendix 11 A. The WAC does not indicate that a known release and a SWMU are the same. Ecology response: The WAC may not indicate that a known release and a SWMU are the same; however, a "corrective action" needs to be addressed for those areas identified in WIDS as possible release sites. Released waste must be managed, prior to closure activities, by some process. To that end, Ecology will impose the following conditions: 1. WAC 173-303-640(7)(c) will govern response to all leaks or spills during DST operation. 2. In addition to those requirements, Ecology requires the USDOE and its contractors comply with WAC 173-303-646(1) and (2) for releases of dangerous wastes and dangerous waste constituents.	806(4)(a)(xxiii) and (xxiv), 640(7), 646(1) & (2)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
5.	Appendix 11A, Known Releases, Page APP 11A-1 – 4	General Comment. While the WIDS provides Washington State Plane coordinates as the location for the various unplanned releases, it is unknown if the unplanned releases are located within DST system boundaries. After the DST System boundaries are defined for purposes of permitting, maps should be provided which show the location (in relation to the DST System) of the releases. Response: accept, the DST system boundary has been defined for permitting purposes (see topographic maps Appendix 2A). Topographic maps will be revised to include coordinates for known releases. Ecology response: Provide map.	806(4)(a)(xxiii) and (xxiv)
6.	Appendix 11A, Known Releases, Page APP 11A-1 – 4	Provide topographical maps which show the location of all known releases. While the Waste Information Data System (WIDS) provides Washington State Plane coordinates as the location for the various unplanned releases, it is unknown if the unplanned releases are located within DST system boundaries. Response: accept, please see #5 response above. Ecology response: Provide map.	806(4)(a)(xxiii) and (xxiv)
7.	Appendix 11A, Known Releases, Page APP 11A-1 – 4	General Comment. The known releases are described and the limitation of the documentation is disclaimed on line 10 by the following statement: "Documentation on releases are incomplete." In general, the appendix lacks descriptions of contamination characterization. Characterization information is needed to assist Ecology in assessing the need for corrective action in relation to the releases. The final status DST permit is supposed to include specific requirements for corrective action along with a schedule for completing corrective action activities. The lack of information and characterization in relation to the releases is a significant deficiency. Response: information provide in appendix 11A is to identify areas potentially needing further evaluation at the time of closure. Future planning and execution of closure activities will include these sites as a basis. Ecology response: See Ecology response to Comment #4.	806(4)(a)(xxiii) and (xxiv), 640(7), 646

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
8.	Appendix 11A, Known Releases, Page APP 11A-1 – 4	The appendix lacks descriptions of contamination characterization. At a minimum, for each release, the following information should be provided: 1) location of the release on a topographic map Response: accept, please response to comments 5 and 6 above. Ecology response: Provide map. --- 2) extent of the release and the dangerous constituents present Response: partial accept, WIDs reports contain this type of information; however further characterization will likely be required at the time of closure. Ecology response: Uncertainty in the information mandates that characterization of contaminants occur. The WIDs database is only an estimate based on best available historical information. Permitting the DST to operate another 40+ years requires characterization of the known facility conditions; this is not part of closure. Intermediate actions may be required to mitigate vadose zone and groundwater impacts prior to closure. Also see Ecology response to Comment #4. --- 3) results of sampling and analysis of the release or its source Response: partial accept, sampling and analysis will occur as necessary at the time of closure. Ecology response: Again, the uncertainty in the information mandates that contamination characterization is a must. The WIDs database is only an estimate based on best available historical information. Permitting the DST to operate another 40+ years requires characterization of the known facility conditions; this is not part of closure. Intermediate actions may be required to mitigate vadose zone and groundwater impacts way before closure. Also see Ecology response to comment #4. --- 4) impacts or potential impacts to humans or the environment Response: reject, WIDs reports contain this type of information; however further characterization will be required at the time of closure.	806(4)(a)(xxiii) and (xxiv), 640(7), 646 (1) &(2)

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
	Comment #8 continued	Ecology response: Intermediate actions may be required to mitigate vadose zone and groundwater impacts way before closure. Per WAC 173-303-640 (7) (c) and 646 (1) (b), 646 (2) USDOE-ORP and its contractors must respond to releases in a timely fashion. --- 5) the period over which the release occurred Response: reject, WIDs reports contain this information; Ecology response: Again, intermediate actions may be required to mitigate vadose zone and groundwater impacts prior to closure. --- 6) any other information that supports the corrective action decision-making process Response: all current information regarding the spills identified in Appendix 11A is summarized in the individual WIDs reports. Ecology response: The amount of information provided herein is **not** adequate to support the corrective action decision making process. Intermediate actions may be required to mitigate vadose zone and groundwater impacts way before closure.	
9.	Appendix 11A, Known Releases, Pages APP 11A-1 - 4 General Comment	Included in site description/comment of the WIDS information (general summary reports) are indications that over the years there have been multiple releases associated with DST system components which are documented. Appendix 11A should include a description of such documentation which includes references where the information may be retrieved. Response: reject, the intent of Appendix 11A is to identify potential known release sites within the DST system, not to fully describe each site. Any documents referenced in the WIDs general summary reports can be provided upon request. Ecology response: Response is inadequate. As previously stated in comments #7 and 8, there needs to be enough information provided to support the corrective action decision making process. Intermediate actions may be required to mitigate vadose zone and groundwater impacts prior to closure. See Ecology response to Comment #4.	806(4)(a)(xxiii) and (xxiv)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
10.	Appendix 11A, Known Releases, Pages APP 11A-1 – 4 General Comment	Included in site description/comment of the WIDS information (general summary reports) are indication that over the years there have been multiple releases associated with DST system piping. Information obtained during pipe testing indicating pipe failure (i.e., integrity assessment, standard operating procedures, system readiness testing, etc.) must be provided, with references, in Appendix 11A. In addition, for pipe sections that have failed testing, the location of the failed pipe testing should be identified on a map as a location of a potential release. Response: reject, the purpose of Appendix 11A is to identify known releases not SWMU. The WIDS summary reports meet the requirements specified in WAC-173-303-806 except for "(I) The location of the release on the topographic map required under (a)(xviii) of this subsection." Location of releases will be added to the next revision to the DST System Topographic Maps (xxiv) Information requirements for known releases. (A) In order to provide for corrective action necessary to protect human health and the environment, the following information is required for all known significant releases of dangerous waste and dangerous constituents (as defined by WAC 173-303-646 (2)(c)) at, and from, the facility. A significant release is a release which has affected or has the potential to affect human health or the environment at or beyond the facility. (I) The location of the release on the topographic map required under (a)(xviii) of this subsection. (II) General dimensions of the release and any relevant structural description. For example, if the release is from a storage tank, provide a structural description of the tank. Supply any available drawings. (III) Time frame over which the release occurred. (IV) Specification of all dangerous waste or dangerous constituents (as defined by WAC 173-303-646 (2)(c)) present in the release, to the extent available. Ecology response: WAC 173-303-806(4)(a)(xxiii) and (xxiv) states "In order to provide for corrective action necessary to protect human health and the environment, the following information is required for all known significant releases of dangerous waste and dangerous constituents (as defined by WAC 173-303-646 (2)(c)) at, and from, the facility.	806(4)(a)(xxiii) and (xxiv)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
11.	Appendix 11A, Known Releases, Pages APP 11A-1 – 4 General Comment	A review of the WIDS information (general summary reports) indicates that many of the sites of releases are not specifically marked or posted. A map showing the locations of the unplanned releases must be submitted. If such information cannot be retrieved, a schedule for characterizing contamination for purposes of delineating the SWMUs must be included in Chapter 11. Response: accept, see response to comment #5 above. Ecology response: Provide map.	806(4)(a)(xxiii) and (xxiv)
12.	Appendix 11A, Known Releases, Pages APP 11A-1 – 4 General Comment	Due to the lack of SWMU characterization information, radiological survey information is requested for the entire DST system. This information will reduce the need for extensive soil sampling for contaminants of concern. If a database exists which tracks radiological surveys associated with SWMUs, the database should be identified in Appendix 11A. Also, if a database exists which tracks radiological surveys associated with SWMUs the information available regarding the DST system must be summarized in Appendix 11A. Response: reject, radiological survey information is outside the scope of the DST application. Data bases that track radiological surveys are required under the AEA. An example of this type of information could be supplied during the NOD workshops for information only, and to aid in discussions regarding SWMUs. Ecology response: WAC 173-303-806(4)(a)(xxiii) and (xxiv) states "In order to provide for corrective action necessary to protect human health and the environment, the following information is required for all known significant releases of dangerous waste and dangerous constituents [as defined by WAC 173-303-646 (2)(c)] at, and from, the facility. Provide all characterization surveys, reports, and data that record all releases from the DST system.	806 (4) (a)(xxiv) (iv)

WASHINGTON STATE DEPARTMENT OF ECOLOGY
DOUBLE-SHELL TANK PERMIT APPLICATION NOTICES OF DEFICIENCY
RESPONSE TABLE
02/24/05

No.	Position in Document	Comments/Response Appendix 11A	Regulatory Citation
13.	Appendix 11A, Known Releases, Page APP 11A-1 – 4. General Comment.	The text indicates that "Release information is tracked through a sitewide database." Other Hanford Site databases and information sources may be reviewed for additional information that should be included in Appendix 11A. For example, the Hanford Site Atlas (BHI-01119 Rev. 1) contains a map of the 241-AP Tank Farm that indicates locations of soil borings. In an attempt to obtain the soil boring information, the Hanford Environmental Information System (HEIS) was queried without success. Further attempt to obtain the information yielded drill logs and well completion reports for the soil borings. From the well completion report, it is indicated that the purpose for the well is: "stratigraphy identification and radiological assessment". It is understood that information from soil borings is supposed to be maintained in the Hanford Environmental Information System (HEIS) database. However, the HEIS neither included information about the soil borings or information obtained during the radiological assessment. All information available should be provided. Also, information as described above should be available from Hanford databases. Response: partial accept release information found outside of WIDs data base can be considered for summary inclusion into the DST application. However the scope this deliverable will require negotiation through the NOD workshop Ecology response: Ecology maintains its authority to require this information under WAC 173-303-806(4)(a)(xxiv)(I)-(IV)	806(4)(a)(xxiii) and (xxiv)